

**THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

LOCHNER TECHNOLOGIES, LLC,

§

*Plaintiff,*

§

v.

CASE NO. 2:10-CV-430-JRG

LENOVO (UNITED STATES) INC., et al.,

§

*Defendants.*

§

§

§

**MEMORANDUM OPINION AND ORDER**

Before the Court are Plaintiff Lochner Technologies, LLC's Opening Claim Construction Brief (Dkt. No. 163), Defendant Synnex Corporation's response (Dkt. No. 166), and Plaintiff's reply (Dkt. No. 168).

The Court held a claim construction hearing on January 6, 2015.

## Table of Contents

<b>I. BACKGROUND.....</b>	<b>3</b>
<b>II. LEGAL PRINCIPLES .....</b>	<b>3</b>
<b>III. CONSTRUCTION OF AGREED TERMS .....</b>	<b>8</b>
<b>IV. CONSTRUCTION OF DISPUTED TERMS .....</b>	<b>9</b>
A. “base storage and control system” .....	9
B. “input-output system” .....	16
C. “portable” .....	21
D. “a display element producing an output signal based on the input signal and execution of the application program, [said output signal being produced in bursts, with delays between the bursts, during which delays, no information is transmitted]”.....	25
E. “an arrangement for providing a continuously-displayed full screen display [that differs from a previously-received full screen display], using the display output signal received in bursts to generate a portion of the full screen display corresponding to the display output signal” .....	32
F. “an arrangement for demodulating a communicated signal” and “an arrangement for modulating at least one of the input signal and the output display signal” .....	36
<b>V. CONCLUSION.....</b>	<b>38</b>

## I. BACKGROUND

Plaintiff brings suit alleging infringement of United States Patent No. 7,035,598 (“the ‘598 Patent”) (Dkt. No. 163, Ex. A), titled “Modular Computer System.” The ‘598 Patent issued on April 25, 2006, and bears a priority date of January 18, 1991. Plaintiff asserts Claims 1-8, 10, and 12 of the ‘598 Patent. (Dkt. No. 166, at 1.) The Abstract states:

A computer system composed of a storage and control unit including components for receiving and processing input data signals and components for producing output signals based on the input data signals; an input/output unit including components for generating input signals and output components for providing a display based on output signals; and a wireless link between the units for conducting data signals from the components for generating input signals to the components for receiving and processing input signals and for conducting output signals from the components for producing output signals to the output components.

The Court construed various terms in the ‘598 Patent in *Lochner Technologies, LLC v. Hewlett-Packard Company, et al.*, No. 2:09-CV-177, Dkt. No. 112, 2010 WL 4179200 (E.D. Tex. Oct. 20, 2010) (Everingham, J.) (“HP”), which is attached to Plaintiff’s opening brief as Exhibit B.<sup>1</sup> The HP case ended with settlements within five months after entry of the Court’s claim construction order and prior to any trial.

The ‘598 Patent is also the subject of ongoing litigation in the Central District of California, including a decision by the Court of Appeals for the Federal Circuit. *Lochner v. Vizio, Inc.*, No. 2013-1551, 567 F. App’x 931 (Fed. Cir. June 27, 2014) (“Vizio”).

## II. LEGAL PRINCIPLES

It is understood that “[a] claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention.” *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed.

---

<sup>1</sup> Citations to page numbers in HP are to the page numbering of the slip opinion.

Cir. 1999). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent's claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee’s invention. Otherwise, there would be no need for claims. *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This Court’s claim construction analysis is substantially guided by the Federal Circuit’s decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In

particular, the court reiterated that “the claims of a patent define the invention to which the patentee is entitled the right to exclude.” 415 F.3d at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention and that patents are addressed to, and intended to be read by, others skilled in the particular art. *Id.*

Despite the importance of claim terms, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of “a fully integrated written instrument.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314-17. As the Supreme Court stated long ago, “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and

intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.

*Phillips*, 415 F.3d at 1316. Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the PTO understood the patent. *Id.* at 1317. Because the file history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*; see *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that “a patentee’s statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation”).

*Phillips* rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes.

*Phillips*, 415 F.3d at 1319-24. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of “focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent.” *Id.* at 1321.

*Phillips* emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.*

*Phillips* does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323-25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

The Supreme Court of the United States has recently “read [35 U.S.C.] § 112, ¶ 2 to require that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). “A determination of claim indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), abrogated on other grounds by *Nautilus*, 134 S. Ct. 2120.

In general, prior claim construction proceedings involving the same patents-in-suit are “entitled to reasoned deference under the broad principals of *stare decisis* and the goals articulated by the Supreme Court in *Markman*, even though *stare decisis* may not be applicable *per se.*” *Maurice Mitchell Innovations, LP v. Intel Corp.*, No. 2:04-CV-450, 2006 WL 1751779, at \*4 (E.D. Tex. June 21, 2006) (Davis, J.); accord *TQP Development, LLC v. Inuit Inc.*, No. 2:12-CV-180, 2014 WL 2810016, at \*6 (E.D. Tex. June 20, 2014) (Bryson, J.) (“[P]revious

claim constructions in cases involving the same patent are entitled to substantial weight, and the Court has determined that it will not depart from those constructions absent a strong reason for doing so.”).

The Court nonetheless conducts an independent evaluation during claim construction proceedings. *See, e.g., Texas Instruments, Inc. v. Linear Techs. Corp.*, 182 F. Supp. 2d 580, 589-90 (E.D. Tex. 2002); *Burns, Morris & Stewart Ltd. P'ship v. Masonite Int'l Corp.*, 401 F. Supp. 2d 692, 697 (E.D. Tex. 2005); *Negotiated Data Solutions, Inc. v. Apple, Inc.*, No. 2:11-CV-390, 2012 WL 6494240, at \*5 (E.D. Tex. Dec. 13, 2012).

### **III. CONSTRUCTION OF AGREED TERMS**

The Court hereby adopts the following agreed constructions:

<u>Term</u>	<u>Agreed Construction</u>
“in bursts”  (Claims 1 & 12)	“in non-continuous transmissions”
“asynchronous signal”  (Claim 7)	“a signal sent at irregular intervals rather than at clocked times”

(Dkt. No. 160, 11/3/2014 Joint Claim Construction and Prehearing Statement Pursuant to Patent Local Rule 4-3 at Ex. A.)

## IV. CONSTRUCTION OF DISPUTED TERMS

### A. “base storage and control system”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
<p>No construction necessary.</p> <p>If construed, “base storage and control system” should be construed as it is defined in the claims in which it appears[, as:]</p> <p>... (1) a processor, (2) a non-volatile memory, (3) a display element producing an output signal based on the input signal and execution of the application program, and (4) a wireless transceiver.</p>	<p>“a unit containing all of the components of a conventional CPU, including a microprocessor, memory, input/output interfaces and a variety of disc drives, that either contains a transceiver or is coupled to a transceiver by an input cable and an output cable”</p>

(Dkt. No. 163, at 8; Dkt. No. 166, at 6.) This disputed term appears in Claims 1 and 12. *HP* did not address this term but did address the related, below-discussed term “input-output system.” The Court in *HP* construed “input-output system” to mean “a system having the limitations called out in the remainder of the claim.” *HP* at 13 & 17.

#### (1) The Parties’ Positions

Plaintiff argues that this disputed term is “merely the descriptive name[] used in the asserted claims to refer to the collection of limitations set forth in the body of the claim.” (Dkt. No. 163, at 9.) Plaintiff further argues that “nothing in the intrinsic evidence indicates a clear disavowal by the inventors of base storage and control units that include additional components, or that exclude some of these components that are not recited in the claim language itself.” (*Id.*, at 10.)

Defendant responds that “the specification explains that the base storage and control system contains all the components of a conventional computer,” and “in the only embodiments described in the specification, the base storage and control system either includes a transceiver,

or is coupled to a transceiver by an input cable and an output cable.” (Dkt. No. 166, at 7 & 8.)

Defendant argues that the Court should depart from *HP* because a case that *HP* cited, *IMS Technology, Inc. v. Haas Automation, Inc.*, involved a term that appeared in a preamble rather than in the body of a claim. (*Id.*, at 9 (citing 206 F.3d 1422 (Fed. Cir. 2000).)

Plaintiff replies: “[Defendant] proposes that a ‘base[] storage and control system’ by itself includes a microprocessor, memory, and a transceiver. But each of these features is separately recited in the remainder of the claim language.” (Dkt. No. 168, at 1.) Plaintiff also emphasizes that disclosures regarding “unit 4,” which Defendant has cited, refer to what unit 4 “can be,” not “must be.” (*Id.* at 2-3.)

## (2) Analysis

Claims 1 and 12 recite (emphasis added):

1. A wireless computer system comprising:
  - a base storage and control system* including:
    - a processor, receiving and using an input signal in real-time, the input signal being for use in interacting with an application program being executable at the base storage and control system,
    - a non-volatile memory,
    - a display element producing an output signal based on the input signal and execution of the application program, said output signal being produced in bursts, with delays between the bursts, during which delays, no information is transmitted, and
    - a wireless transceiver that wirelessly communicate [sic] the display output signal when produced;
  - at least one portable input-output system for use with the base storage and control system, the portable input-output system including:
    - a wireless transceiver, which wirelessly communicates the input signal to the base storage and control system and wirelessly receives the display output signal from the base storage and control system,
    - a user interface, allowing inputting an information item and generating an input signal corresponding to the information item the input signal being wirelessly communicable in real-time to the base storage and

control system to interact with the application program being executable at the base storage and control system, and

an arrangement for providing a continuously-displayed full screen display using the display output signal received in bursts to generate a portion of the full screen display corresponding to the display output signal.

\* \* \*

12. A wireless computer system comprising:

*a base storage and control system* including:

a processor, receiving and using an input signal in real-time, the input signal being for use in interacting with an application program being executable at the base storage and control system,

a non-volatile memory,

a display element producing an output signal based on the input signal and execution of the application program, said output signal being produced in bursts, with delays between the bursts, during which delays, no information is transmitted, and

a wireless transceiver that wirelessly communicate [sic] the display output signal when produced in bursts;

at least one portable input-output system for use with the base storage and control system, the portable input-output system including:

a wireless transceiver, which wirelessly communicates the input signal to the base storage and control system and wirelessly receives the display output signal from the base storage and control system,

a user interface, allowing inputting an information item and generating an input signal corresponding to the information item, the input signal being wirelessly communicable in real-time to the base storage and control system to interact with the application program being executable at the base storage and control system, and

an arrangement for providing a continuously-displayed full screen display that differs from a previously-received full screen display, using the display output signal received in bursts to generate a portion of the full screen display corresponding to the display output signal.

The claims thus recite a “nested” structure in which the claim limitations are divided between two distinct components, namely a “base storage and control system” on one hand and a portable “input-output system” on the other.

The specification discloses various potential attributes of a base storage and control system:

The storage and control unit can be constructed in a manner similar to conventional basic computer systems or work stations, to include a *CPU with microprocessor, input/output interfaces, memories and disc drives*. According to the invention, such a unit will be supplemented by a wireless *transceiver* constructed to exchange signals with the input/output unit.

'598 Patent at 2:22-28 (emphasis added).

[A] single storage and control unit could be shared by one or more users provided with respective input/output units and a further user stationed at a keyboard and monitor which are connected to the storage and control unit by the usual connecting cables.

*Id.* at 2:50-54.

[Storage and control u]nit 4 can be quite comparable to a basic computer system, which *typically includes all necessary computer components except for display and input devices*. Unit 4, thus, contains a CPU with microprocessor, memory, input/output interfaces and a variety of disc drives, including CD-ROMs. Unit 4 may be connected to any number of peripheral devices, including telephone modems, printers and larger storage units. The number of peripheral devices connected to unit 4 will not interfere 10 [sic] with the convenience offered by the computer system according to the present invention since unit 4 is intended to remain stationary.

Unit 4 does differ from conventional consoles in that it includes a transceiver 24 which, as will be explained in greater detail below, can communicate with transceiver 14, for which purpose each transceiver is provided with an antenna 26, 28.

*Id.* at 3:31-47 (emphasis added).

According to another embodiment of the invention, illustrated in FIG. 3, the unit 4 for FIG. 1 is constructed in two parts, a unit 70 containing all of the components of a conventional CPU, and a transceiver unit 72 containing all of the components

of transceiver 24 of FIGS. 1 and 2, including antenna 28, and coupled to unit 70 by an input cable 74 and an output cable 76.

This arrangement offers the notable advantage that unit 70 can be constituted by a conventional computer “box,” i.e. containing a CPU, disk drives, memory, controllers and interfaces, but *excluding a keyboard a [sic, and] monitor*, connected to transceiver 72 by cables 74 and 76. Thus, to utilize the present invention, the owner of a computer would need to purchase only unit 2 of FIG. 1 and transceiver 72.

*Id.* at 5:7-20 (emphasis added).

These features, however, are disclosed in relation to specific embodiments and should not be imported into the meaning of the disputed term. *See Electro Med.*, 34 F.3d at 1054.

As to the prosecution history, in a letter to the patent examiner regarding parent Application No. 08/332,499, the patentee stated:

Overall, my invention as embodied in my patent application consists of a simple but powerful concept: cut the cord between the computer itself and its video display and keyboard (and/or other input device) and get the same identical functionality through wireless communications.

(*Id.*, Ex. K, 6/11/1996 Letter, at 2 (emphasis omitted).) Because this related to a different application with different claims, however, Defendant has failed to demonstrate that the patentee’s characterization of “my invention” warrants any finding of disclaimer as to the disputed term here at issue in the ‘598 Patent.

Likewise, in an appeal to the Federal Circuit during prosecution of parent Application No. 08/332,499, the patentee stated that the “storage and control unit” is “*basically* a computer without a keyboard or monitor - a CPU with a microprocessor, various interfaces, memories, software programs, etc.” (Dkt. No. 166, Ex. J, 4/26/2002 Appeal Brief, at 4 (2002 WL 32620103, at \*4) (emphasis added).) Because this related to a different application with different claims (*see* 2002 WL 32620103, at \*6-\*7), and particularly in light of the patentee’s use of “*basically*,” Defendant has failed to identify any definitive statement that would warrant finding

a disclaimer. *See Omega Eng’g v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003) (“As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on *definitive* statements made during prosecution.”) (emphasis added); *id.* at 1325-26 (“[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both *clear and unmistakable*.”) (emphasis added).

The Court thus reaches the same conclusion that *HP* reached as to the related term “input-output system,” which is addressed below. The Court accordingly hereby expressly rejects Defendant’s proposed construction.

Defendant argues that *HP* erred by relying upon *IMS*, which addressed a term that appeared in a preamble rather than in the body of a claim. *See* 206 F.3d at 1434 (“The phrase ‘control apparatus’ in the preamble merely gives a descriptive name to the set of limitations in the body of the claim that completely set forth the invention.”). Defendant’s argument is unavailing because *HP* merely found *IMS* “instructive.” *HP* at 16. In other words, *HP* extended the principle articulated in *IMS* to aid the Court in interpreting descriptive names given to sets of limitations in the bodies of the claims.

Nonetheless, “claims are interpreted with an eye toward giving effect to all terms in the claim.”” *Digital-Vending Servs. Int’l, LLC v. Univ. of Phoenix, Inc.*, 672 F.3d 1270, 1275 (Fed. Cir. 2012) (quoting *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006)). Specifically, Defendant argues, if the disputed term were read as merely referring to other limitations recited elsewhere in the claims, then the term “base storage and control unit” would have no effect on the scope of the claims.

On one hand, the conclusion reached in *HP* is consistent with the above-noted “nested” format of the claims (quoted above), in which a group of limitations associated with a “base storage and control unit” is distinct from a group of limitations associated with a portable “input-output system.” Also of note, some of the limitations associated with the “input-output system” refer back to the “base storage and control unit.”

On the other hand, nothing about this nested structure of the claims is inconsistent with reading the disputed term to have its plain meaning, which may include meaning beyond merely what is recited in the other associated limitations. Indeed, the claims recite a base storage and control unit “including” various limitations, not that the base storage and control unit is defined by those separately-recited limitations. Further, whereas the claims require that the “input-output system” must be “portable,” the claims do not require the “base storage and control system” to be portable. This distinction demonstrates that the terms “base storage and control system” and “portable input-output system” have meaning, and “portable” is a disputed term addressed separately, below.

The Court accordingly hereby construes “**base storage and control system**” to have its **plain meaning**.

## B. “input-output system”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
<p>No construction necessary.</p> <p>If construed, “input-output system” should be construed as it is defined in the claims in which it appears.</p> <p>Claim 1 defines an “input-output system” as (1) a wireless transceiver, (2) a user interface, and (3) an arrangement for providing a continuously-displayed full screen display.</p> <p>Claim 12 defines an “input-output system” as (1) a wireless transceiver, (2) a user interface, and (3) and [sic] an arrangement for providing a continuously-displayed full screen display that differs from a previously-received full screen display.</p>	<p>“a unit composed essentially of an input device, an output device, and a transceiver, excluding such features of a full-service computer as non-volatile data storage and the ability to execute application programs”</p>

(Dkt. No. 163, at 8-9; Dkt. No. 166, at 12.) This disputed term appears in Claims 1 and 12.

In *HP*, defendant Hewlett-Packard (“HP”) proposed: “A device dedicated to only I/O functions (i.e., not for non-volatile data storage or execution of application programs); or “A device having input-output functionality that does not perform non[-]volatile data storage or execution of application programs.” *HP* at 13. The Court found that the patentee “has been consistent throughout [the prosecution history] and has never expressly limited the ‘input-output system’ as HP contends.” *Id.* at 16. The Court construed “input-output system” to mean “a system having the limitations called out in the remainder of the claim.” *Id.* at 17.

### (1) The Parties’ Positions

Plaintiff argues this term together with the term “base storage and control system,” addressed above. (*See* Dkt. No. 163 at 8.) Plaintiff also argues that in *HP*, the Court rejected a proposal similar to what Defendant is proposing here. (*Id.*, at 9-10.)

Defendant responds that the Federal Circuit found that “to overcome certain prior art, [the patentee] expressly excluded features of a full-service computer, such as non-volatile data storage and the ability to execute application programs.” (Dkt. No. 166, at 12 (quoting 567 F. App’x at 934).) Defendant further argues that “the *only* solution that the ‘598 Patent proposes to solve the portability problem is to limit the number of components in the input-output system.” (Dkt. No. 166, at 13.) Defendant submits that the prosecution history of the patent-in-suit (and parent applications) is consistent with such a reading. (*See id.*, at 13-14.) Defendant notes: “Negative limitations are adequately supported when the specification describes a reason to exclude the relevant limitation. Such written description support need not rise to the level of a disclaimer.” *Santarus, Inc. v. Par Pharm., Inc.*, 694 F.3d 1344, 1351 (Fed. Cir. 2012).

Plaintiff replies by reiterating: “‘Input-output system’ should be construed as a descriptive name given to the components specifically recited in the language following that introductory language for the same reasons given with regard to the term ‘base storage and control system’ above, as the Court previously determined.” (Dkt. No. 168, at 6.) Plaintiff also explains that “[w]hile certain embodiments and examples make clear that the components *could* be limited, none of them *require* such limitations.” (*Id.*) Further, Plaintiff submits that “[t]he Federal Circuit ruling in *Vizio* did not direct the district court to adopt a negative limitation. It directed the district court to consider the specification and file history because it had not done so.” (*Id.*, at 6-7.) Finally, Plaintiff submits that Defendant has cited certain prosecution history out of context, arguing that Defendant “relies exclusively on statements made about different claims with different limitations.” (*Id.*, at 7-8 (citing *id.*, Ex. D (quoted below))).

(2) Analysis

Claims 1 and 12, in which the disputed term appears, are reproduced in the discussion of the term “base storage and control system,” above.

The specification discloses:

Since one unit of the computer need only include an input device, typically a keyboard, and an output device, typically a display, as well as a transceiver unit, this unit can be relatively light in weight and hence portable.

\* \* \*

The input/output unit differs from known devices in that, in its *preferred form of construction*, it consists only of a keyboard and a display device, along with an associated transceiver unit. The manner in which power is supplied to the input/output unit will depend primarily on the nature of the display device.

‘598 Patent at 2:5-8 & 2:29-34 (emphasis added).

Unit 2 is composed essentially of three components, a keyboard 10, a monochrome or color display device 12 and a wireless transceiver device 14.

\* \* \*

Because of the limited number of components forming unit 2, this can be conveniently constructed to have the general form of a briefcase, including a carrying handle 18. Unit 2 can then be easily transported from one location to another within the operating range of the wireless link associated with the computer system.

*Id.* at 3:7-9 & 3:20-25.

During prosecution of a parent application, the patentee stated that the input-output system is “a simple, lightweight, and inexpensive remote input/output unit *essentially dedicated to only I/O functions (i.e., not for non-volatile data storage or execution of application programs.)*” (*Id.*, Ex. M, 7/26/1993 Amendment After Final Rejection (Application No. 07/642,831), at 5 (emphasis in original).) Similarly, the patentee stated in another related prosecution that “the remote unit does not need to be a stand-alone computer having

communications capabilities, but only a relatively ‘dumb’ terminal that relies upon the computing power of the base station.” (*Id.*, Ex. B, 3/25/1994 Amendment After Final (Application No. 08/120,649), at 8.)

Also, in a letter to a patent examiner regarding parent Application No. 08/332,499, the patentee stated:

Overall, my invention as embodied in my patent application consists of a simple but powerful concept: cut the cord between the computer itself and its video display and keyboard (and/or other input device) and get the same identical functionality through wireless communications.

(*Id.*, Ex. K, 6/11/1996 Letter, at 2 (emphasis omitted).)

In an appeal to the Federal Circuit during prosecution of parent Application No. 08/332,499, the patentee stated:

The remote “input/output unit” is a portable monitor (graphics display) and keyboard with no microprocessor of its own.

\* \* \*

Because the input/output unit does not have its own microprocessor, memory, drives, etc., it is light-weight and easily portable.

(Dkt. No. 166, Ex. J, 4/26/2002 Appeal Brief, at 4 & 5 (2002 WL 32620103, at \*4 & \*5).)

These parent applications, however, contained different claim language. For example, Plaintiff has submitted that in Application No. 07/642,831, the claim at issue recited that “substantially all non-volatile storage of data and substantially all execution of application programs for processing input data signals is performed by the storage control unit, and wherein the input/output unit is essentially capable of only input and display of data.” (Dkt. No. 168, Ex. D, 7/26/1993 Amendment After Final Rejection, at 3.)<sup>2</sup>

---

<sup>2</sup> The parties have not presented the applicable language of the claims of Application No. 08/120,649 or Application No. 08/332,499. As to the latter, however, the April 26, 2002

The above-cited prosecution history of parent applications thus does not contain any definitive statements applicable to the disputed term here at issue in the ‘598 Patent. *See Omega Eng’g*, 334 F.3d at 1324 (“As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on *definitive* statements made during prosecution.”) (emphasis added); *id.* at 1325-26 (“[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both *clear and unmistakable*.”) (emphasis added).

As to the *Vizio* decision, various courts have found that a construction by the Federal Circuit is binding as to all future litigation even with different parties. *See, e.g., Eolas Techs., Inc. v. Adobe Sys., Inc.*, No. 6:09-CV-446, 2011 WL 11070303 (E.D. Tex. Sept. 23, 2011) (Davis, J.) (citing *Amgen, Inc. v. Hoffmann-LaRoche Ltd.*, 494 F. Supp. 2d 54, 60-61 (D. Mass. 2007); *Pass & Seymour, Inc. v. Hubbell Inc.*, No. 5:07-CV-945, 2011 WL 32433, at \*2 (N.D.N.Y. Jan. 5, 2011) (“[D]istrict courts are bound to apply the Federal Circuit’s claim constructions, even as against non-parties to the initial litigation.”); *Rambus Inc. v. Hynix Semiconductor, Inc.*, 569 F. Supp. 2d 946, 963 (N.D. Cal. 2008) (“A district court must apply the

---

Appeal Brief sets forth claim language. Although Defendant provided only excerpts of that brief (*see* Dkt. No. 166, Ex. J), the complete brief sets forth the language of a “representative” claim. *See* 2002 WL 32620103, at \*6-\*7. That claim recites, in relevant part:

wherein substantially all non-volatile storage of data and substantially all execution of application programs for processing input data signals is performed by the storage and control unit, wherein special adaptation of such application programs is not required for interaction with each input/output unit, and wherein the input/output unit is essentially capable of only data input and essentially full screen display of data.

*Id.*, at \*7.

Federal Circuit's claim construction even where a non-party to the initial litigation would like to present new arguments.”)).

Here, however, the Federal Circuit's comments in *Vizio* regarding the above-discussed prosecution history<sup>3</sup> do not warrant finding any disclaimer because *Vizio* vacated and remanded for further proceedings, “including new claim construction,” without construing “input-output system” (or any other term). *See* 567 F. App'x at 934, 940-41; *see also id.* at 932 (“Lochner appeals from the district court's final judgment that the asserted claims are invalid for: (1) lack of written description under 35 U.S.C. § 112, ¶ 1; and (2) failure to claim what the applicants regard as their invention under 35 U.S.C. § 112, ¶ 2.”) & 940 (“Because the court's written description analysis is predicated on a fundamentally flawed claim construction, *we do not reach the merits of the parties' arguments*. Instead, we vacate the court's invalidity decision and remand for further proceedings.”) (emphasis added); *id.* (similar conclusion as to the “regards as invention” requirement).

Thus, for substantially the same reasons discussed above as to the term “base storage and control unit,” the Court hereby expressly rejects Defendant's proposed construction and hereby construes “**input-output system**” to have its **plain meaning**.

### C. “portable”

Plaintiff's Proposed Construction	Defendant's Proposed Construction
No construction necessary.  If construed, “portable” should be construed as “capable of being carried or conveyed.”	“relatively light in weight and easily transportable from one location to another within the operating range of the wireless link”

---

<sup>3</sup> *Vizio* cited the July 26, 1993 Amendment After Final Rejection (Application No. 07/642,831) (Dkt. No. 166, Ex. M, at 5) and the March 25, 1994 Amendment After Final (Application No. 08/120,649) (Dkt. No. 166, Ex. B, at 8), both of which are addressed above. *See* 567 F. App'x at 934.

(Dkt. No. 163, at 11; Dkt. No. 166, at 9.) This disputed term appears in Claims 1, 10, and 12.

*HP* did not address this term.

(1) The Parties' Positions

Plaintiff urges that “[t]he term is not used in any specialized sense, as opposed to its commonly-understood meaning.” (Dkt. No. 163, at 11.) Plaintiff argues that “nothing in the specification limits ‘portable’ to lightness in weight, particularly not in the vague sense proposed by [Defendant].” (*Id.*, at 12.) Likewise, Plaintiff argues that Defendant’s proposal of “easily” “is another vague word of degree that provides no guidance as to its bounds and does not provide any useful construction.” (*Id.*) Finally, Plaintiff argues that Defendant’s proposed reference to wireless range is inappropriate because “[j]ust as a briefcase is portable even when it is not being carried, an input-output unit would not suddenly become non-portable simply because someone carried it outside the range of a wireless link.” (*Id.*, at 13.)

Defendant responds that construction is necessary because “there is ambiguity between the portable-because-untethered and portable-because[-]lightweight interpretations.” (Dkt. No. 166, at 10.) As to Plaintiff’s alternative proposed construction, Defendant responds that “almost anything is ‘capable of being carried or conveyed’ with a powerful enough crane,” and “[u]nder [Plaintiff’s] proposed construction, both the ‘base storage and control system’ and the ‘input-output system’ would be deemed ‘portable’ . . . .” (*Id.*, at 11.) Defendant explains that the portability of the “input-output system” is relative to the “base storage and control system.” (*Id.*)

Plaintiff replies that “[Defendant] cites passages that give examples of portability, but they do not purport to define the term.” (Dkt. No. 168, at 4.) Plaintiff also argues that Defendant’s proposals of “light in weight” and “easily transportable” are redundant. (*Id.*)

Further, Plaintiff argues, “[p]ortability relates to the ease with which an object can be moved, not where an object can be moved or is located.” (*Id.*, at 5.) Finally, Plaintiff submits that despite Defendant’s apparent argument to the contrary, “neither proposed construction is premised on the device being untethered.” (*Id.*)

(2) Analysis

Claims 1 and 12 are reproduced in the discussion of the term “base storage and control system,” above, and Claim 10 depends from Claim 1.

The specification discloses:

Since one unit of the computer need only include an input device, typically a keyboard, and an output device, typically a display, as well as a transceiver unit, this unit can be *relatively light in weight* and hence *portable*.

\* \* \*

Such an arrangement will permit a wide variety of applications to be implemented more rapidly and conveniently. For example, the user can move with great ease from one location to another within a defined work area to obtain information which can then be inputted to the computer.

\* \* \*

Because of the limited number of components forming unit 2, this can be conveniently constructed to have the general form of a briefcase, including a carrying handle 18. Unit 2 can then be *easily transported from one location to another within the operating range of the wireless link* associated with the computer system.

‘598 Patent at 2:5-8, 2:15-19 & 3:20-25.

As for the prosecution history, the patentee stated during an appeal regarding parent Application No. 08/332,499:

The remote “input/output unit” is a *portable* monitor (graphics display) and keyboard with no microprocessor of its own.

\* \* \*

Because the input/output unit does not have its own microprocessor, memory, drives, etc., it is light-weight and easily *portable*.

(Dkt. No. 166, Ex. J, 4/26/2002 Appeal Brief, at 4 & 5 (2002 WL 32620103, at \*4 & \*5)

(emphasis added).) As discussed above regarding the “base storage and control system” and the “input-output system,” however, this prosecution history pertained to different claims.

As to extrinsic evidence, Plaintiff has submitted a dictionary that defines “portable” as meaning: “*adj.* 1. capable of being carried or conveyed. 2. easily carried or conveyed by hand. 3. *Obs.* durable. —*n.* 4. something that is portable, esp. as distinguished from a nonportable counterpart.” (Dkt. No. 163, Ex. C, *The Random House College Dictionary* 1033 (revised ed. 1988).)

On balance, the intrinsic and extrinsic evidence demonstrate that “portable” describes the “input-output system” in relation to the “base storage and control system.” Defendant’s proposal that the “input-output system” is relatively “easily transportable,” when properly framed in that manner, should therefore be adopted. *See* ‘598 Patent at 2:5-8 & 3:20-25 (quoted above). By contrast, Defendant’s proposal of “within the operating range of the wireless link” would tend to confuse rather than clarify the scope of the claims because the specification describes portability with reference to comparatively reduced size and weight, as quoted above, and because the operating range is not recited in the claims.

The Court accordingly hereby construes “**portable**” to mean “**easily transportable as compared with the base storage and control system.**”

**D. “a display element producing an output signal based on the input signal and execution of the application program, [said output signal being produced in bursts, with delays between the bursts, during which delays, no information is transmitted]”<sup>4</sup>**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendant’s Proposed Construction</b>
No construction necessary.  If construed, the claim element should be construed as: “an interface device producing an output signal based on the input signal and execution of the application program”	Indefinite.  This claim element is a means-plus-function claim element and is subject to 35 U.S.C. § 112, ¶ 6.

(Dkt. No. 163, at 13; Dkt. No. 166, at 15.) This disputed term appears in Claims 1 and 12 and is recited as part of the “base storage and control system.”

In *HP*, the Court rejected HP’s proposal that this disputed term refers to a “special interface card” that produces “a serial bit stream”:

Significantly, [during prosecution] Lochner did not rely on either the presence of the special interface card or the function of the special interface card (i.e., converting parallel signals to serial ones) to overcome prior art. Rather, the requirement of “burst” transmission alone was sufficient to overcome the prior art. Thus, the Court adopts Lochner’s proposed construction of “display element” as meaning “*an interface device producing an output signal based on the input signal and execution of the application program, said output signal being produced in bursts.*” This construction avoids reading preferred embodiments used to achieve “burst” transmission in to the claim when Lochner has not expressly disavowed other possible embodiments that could achieve “burst” transmission.

*HP* at 12-13 (emphasis added); *see id.* at 9 & 10. HP did *not* argue that this is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6.

---

<sup>4</sup> Plaintiff proposes that the term for construction includes the language in square brackets. (*See* Dkt. No. 163, at 13.) Defendant does not include that language in what Defendant submits as the disputed term. (*See* Dkt. No. 166, at 15 & 18.)

(1) The Parties' Positions

Plaintiff argues that this is not a means-plus-function term because “the claim does not use the term ‘means,’ and recites a definite structure – a display element – that performs a function – producing an output signal based on the input signal and execution of the application program.” (Dkt. No. 163, at 14.)

Defendant responds that “[t]he ‘display element’ term does not connote a structure, but rather, connotes only a function.” (Dkt. No. 166, at 15.) Defendant explains that “element” is a “nonce word” that does not appear in the specification, and “display” fails to connote structure because “even the recited function in the ‘display element’ term does not display anything.” (*Id.*, at 16.) Defendant also emphasizes that the disputed term was introduced during prosecution, when the patentee replaced “an arrangement for providing a display output signal . . .” with “a display element producing an output signal . . .” (*Id.*, at 16 & 17.)

Defendant then argues that “[t]he ’598 Patent specification does not disclose any structure that performs the function of the ‘display element’ set forth in the claims, rendering the term indefinite.” (*Id.*, at 18.) In particular, Defendant urges that the disclosed “special interface card” is not linked to producing an output signal in bursts. (*Id.*, at 19.) Further, Defendant argues, “the ’598 Patent does not disclose any structure for the special interface card, but instead only discloses its function of converting parallel bit signals containing picture information and associated address signals into a serial bit stream.” (*Id.*, at 20.)

Plaintiff replies that the “[d]isplay element” in Claim 1 is presumed to differ in meaning and scope from the ‘means for providing a display output signal’ in Claim 11 and was not intended to be subject to § 112 ¶ 6.” (Dkt. No. 168, at 9.)

## (2) Analysis

Claims 1 and 12, in which the disputed term appears, are reproduced in the discussion of the term “base storage and control system,” above.

It is well settled that [a] claim limitation that actually uses the word “means” invokes a rebuttable presumption that § 112, ¶ 6 applies. By contrast, a claim term that does not use “means” will trigger the rebuttable presumption that § 112, ¶ 6 does not apply. The term “means” is central to the analysis.

*Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1371-1372 (Fed. Cir. 2003) (citations and internal quotation marks omitted); *see Inventio AG v. Thyssenkrupp Elevator Ams. Corp.*, 649 F.3d 1350, 1356 (Fed. Cir. 2011) (“[T]he presumption flowing from the absence of the term ‘means’ is a strong one that is not readily overcome.”); *see also Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1297-98 (Fed. Cir. 2014) (“The strong presumption created by not including means in a claim limitation provides clarity and predictability for the public and the patentee alike.”).

The presumption against applying 35 U.S.C. § 112, ¶ 6 can be overcome. For example, terms such as “mechanism,” “element,” or “device” may be insufficient to avoid means-plus-function treatment:

We agree with the district court’s conclusion that the presumption here is overcome and that the phrase “colorant selection mechanism” should be construed as a means-plus-function limitation. The generic terms “mechanism,” “means,” “element,” and “device,” typically do not connote sufficiently definite structure. In *Personalized Media Commc’ns, LLC v. Int’l Trade Com[m]’n*, 161 F.3d 696 (Fed. Cir. 1998), we addressed the claim term “digital detector.” We contrasted the term “detector,” which recited sufficient structure to avoid 112 ¶ 6, with “generic structural term[s] such as ‘means,’ ‘element,’ or ‘device,’” which do not. *Id.* at 704. Similarly, in *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354 (Fed. Cir. 2004), we recognized that Section 112 ¶ 6 does not apply to “a term that is simply a nonce word or a verbal construct that is not recognized as the name of structure and is simply a substitute for the term ‘means for.’” *Id.* at 1360.

*Mass. Institute of Tech. & Elecs. for Imaging, Inc. v. Abacus Software*, 462 F.3d 1344, 1354-56 (Fed. Cir. 2006) (“MIT”); *see Manual of Patent Examining Procedure* § 2181 (9th ed., Mar.

2014) (“The following is a list of non-structural generic placeholders that may invoke . . . 35 U.S.C. 112, paragraph 6: ‘mechanism for,’ ‘module for,’ ‘device for,’ ‘unit for,’ ‘component for,’ ‘*element for*,’ ‘member for,’ ‘apparatus for,’ ‘machine for,’ or ‘system for.’”’) (emphasis added); *see also Mas-Hamilton Grp. v. LaGard, Inc.*, 156 F.3d 1206, 1214 (Fed. Cir. 1998) (finding that “lever moving element” “cannot be construed so broadly to cover every conceivable way or means to perform the function of moving a lever, and there is no structure recited in the limitation that would save it from application of section 112, ¶ 6”).

In some cases, “adjectival qualifications” may impart sufficient structure to an otherwise non-structural term. *See MIT*, 462 F.3d at 1362; *see also Apex*, 325 F.3d at 1374. Here, the constituent term “display” might be read as connoting structure beyond merely being any structure that performs a displaying function. For example, the specification refers to “cathode-ray tube” displays and “liquid crystal” displays. *See* ‘598 Patent at 2:34-39. The term “display element,” however, appears in a limitation that recites producing a signal (rather than providing a visual display): “a display element *producing an output signal* based on the input signal and execution of the application program, said output signal being produced in bursts, with delays between the bursts, during which delays, no information is transmitted.”

Thus, the “display element” at issue is not akin to a liquid crystal display but rather is something like a computer graphics card with a display port:

In a conventional computer system having graphics display capabilities, *picture information is supplied to a graphics card* via a multiline data bus conducting bit signals in parallel and is stored in a memory under control of address signals generated in unit 4. The *picture information is then read out to deliver picture signals to the display device*.

‘598 Patent at 5:26-31 (emphasis added). Plaintiff has thus suggested:

A person of ordinary skill in the art at the time of the invention would therefore know that the output port/interface that generates a video signal in a conventional computer is an example of the claimed display element.

(Dkt. No. 163, at 14.)

On balance, Plaintiff has failed to substantiate its position with sufficient evidence, either intrinsic or extrinsic. The “display element” term fails to recite structure and instead is directed to any structure that can perform the recited function. *See MIT*, 462 F.3d at 1354-56; *see also Manual of Patent Examining Procedure* § 2181; *Mas-Hamilton*, 156 F.3d at 1214.

Although “previous claim constructions in cases involving the same patent are entitled to substantial weight,” *TQP*, 2014 WL 2810016, at \*6, “when this Court considers a prior construction, it considers that parties may raise different arguments and may highlight different evidence,” *Guardian Media Techs., Ltd. v. Acer Am. Corp.*, No. 6:10-CV-597, 2013 WL 1866901, at \*6 (E.D. Tex. May 2, 2013) (Davis, J.). Here, the Court has been persuaded by arguments that were not presented in *HP*. Specifically, in *HP* no party argued that 35 U.S.C. § 112, ¶ 6 applied.

The Court thus departs from the construction reached in *HP* and concludes that the “display element” term is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6.

The parties do not appear to dispute the claimed function, which is recited as “producing an output signal based on the input signal and execution of the application program, said output signal being produced in bursts, with delays between the bursts, during which delays, no information is transmitted.” The context of surrounding claim language demonstrates that this “output signal” is for transmission to the recited portable input-output system. In particular, the base storage and control system includes “a wireless transceiver that wirelessly communicate [sic] the display output signal when produced [in bursts],” and the portable input-output system

includes “a wireless transceiver, which . . . wirelessly receives the display output signal from the base storage and control system.”

The remaining issue is whether the specification discloses sufficient corresponding structure for performing this claimed function. “[S]tructure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Med. Instrumentation and Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 (Fed. Cir. 2003) (quoting *B. Braun Med. Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997)). The specification discloses:

[Storage and control u]nit 4 can be quite comparable to a basic computer system, which typically includes all necessary computer components except for display and input devices. Unit 4, thus, contains a CPU with microprocessor, memory, *input/output interfaces* and a variety of disc drives, including CD-ROMs.

*Id.* at 3:31-36 (emphasis added).

It should be apparent from the description provided thus far that all of the components of a computer system according to the invention can be produced in the conventional manner, with the exception of transceivers 14 and 24, one preferred embodiment of which is shown in FIG. 2.

*Id.* at 3:48-52.

In a conventional computer, there will be generated, at an *output port*, video and horizontal and vertical synchronizing signals which are supplied individually to a monitor.

*Id.* at 4:16-18 (emphasis added).

According to another embodiment of the invention, the graphics display capability of the system could be enhanced by constructing device 12 as a high resolution display device, including a suitable *graphics card* in unit 2 and installing a *special interface card* in unit 4. In a conventional computer system having graphics display capabilities, picture information is supplied to a *graphics card* via a multiline data bus conducting bit signals in parallel and is stored in a memory under control of address signals generated in unit 4. The picture information is then read out to deliver picture signals to the display device. In this embodiment of the invention, the parallel bit signals containing picture information, and associated address signals, are conducted from the data bus and

an address bus to the *special interface card* and are converted, in the special interface card, into a serial bit stream which is then supplied to a channel defined by transceiver 24. The serial bit stream is modulated and transmitted to transceiver 14. The serial bit stream is modulated and transmitted to transceiver 14. From transceiver 14, the picture information is conducted, under control of the address signals, to appropriate memory locations of the graphics card and the stored information is then supplied to the display device. . . . Information to update the display can be *transmitted in bursts*.

*Id.* at 5:21-48 (emphasis added).

This disclosure thus sets forth structure, namely a graphics card and a special interface card, for wireless burst transmission of a video output signal that corresponds to the claimed function as set forth above, and the Description of the Preferred Embodiments in the ‘598 Patent discloses no other embodiment involving wireless burst transmission. Finally, to whatever extent Defendant is challenging the sufficiency of the description of the special interface card, Defendant’s challenge is not a matter of claim construction but perhaps relates to enablement or written description and, therefore, is not addressed in the present Memorandum Opinion and Order.

The Court accordingly hereby finds that the term “**a display element producing an output signal based on the input signal and execution of the application program, said output signal being produced in bursts, with delays between the bursts, during which delays, no information is transmitted**” is a means-plus-function term, the function is “**producing an output signal based on the input signal and execution of the application program, said output signal being produced in bursts, with delays between the bursts, during which delays, no information is transmitted**,” and the corresponding structure is

“the graphics card and the special interface card disclosed in the ‘598 Patent at 5:21-49;<sup>5</sup> and equivalents thereof.”

E. “an arrangement for providing a continuously-displayed full screen display [that differs from a previously-received full screen display], using the display output signal received in bursts to generate a portion of the full screen display corresponding to the display output signal”

<b>“an arrangement for providing a continuously-displayed full screen display using the display output signal received in bursts to generate a portion of the full screen display corresponding to the display output signal” (Claim 1)</b>	
<b>Plaintiff’s Proposed Construction</b>	<b>Defendant’s Proposed Construction</b>
This term is subject to 35 U.S.C. § 112, ¶ 6.  Function: “providing a continuously-displayed full screen display using the display output signal received in bursts to generate a portion of the full screen display corresponding to the display output signal”  Structure: “the graphics card and the display device described at 5:37-49, and their equivalents”	Indefinite

---

<sup>5</sup> Because the line numbering for column 5 of the patent specification does not align precisely with the lines cited here, the Court includes line number 49 to ensure that the finder of fact will understand that this citation includes the last cited sentence, which discloses burst transmission.

<p><b>“an arrangement for providing a continuously-displayed full screen display that differs from a previously-received full screen display, using the display output signal received in bursts to generate a portion of the full screen display corresponding to the display output signal” (Claim 12)</b></p>	
<p><b>Plaintiff’s Proposed Construction</b></p> <p>This term is subject to 35 U.S.C. § 112, ¶ 6.</p> <p>Function:</p> <p>“providing a continuously-displayed full screen display using the display output signal received in bursts to generate a portion of the full screen display [corresponding to the display output signal]”</p> <p>Structure:</p> <p>“the graphics card and the display device described at 5:37-49, and their equivalents”</p>	<p><b>Defendant’s Proposed Construction</b></p> <p>Indefinite</p>

(Dkt. No. 163, at 15-16 (square brackets Plaintiff’s); Dkt. No. 166, at 21.) These disputed terms are recited as part of the “input-output system.”

The parties agree that these are means-plus-function terms governed by 35 U.S.C. § 112, ¶ 6. (Dkt. No. 163, at 16.) The parties dispute whether the specification discloses sufficient corresponding structure.

#### (1) The Parties’ Positions

Plaintiff submits that in *HP*, the Court rejected the same argument that Defendant has presented here. (Dkt. No. 163, at 16.) Plaintiff argues that “[t]he specification clearly identifies the graphics card and the display device as the arrangement in the input-output system that provides the continuously-displayed full screen display.” (*Id.*, at 16-17 (citing ‘598 Patent at 5:37-49).) Likewise, Plaintiff urges that the term additionally reciting a display “that differs from a previously-received full screen display” “can also be performed by definite structures recited in the specification.” (*Id.*, at 18.)

Defendant responds that the portion of the specification cited by Plaintiff “merely states that the graphics card receives picture information and supplies it to a display device” and “does not state that the graphics card ‘generates’ a portion of the display, or that it does so ‘using the display output signal received in bursts.’” (Dkt. No. 166, at 22.)

Plaintiff replies that in the portion of the specification at issue:

The specification describes a process of the graphics card receiving and storing picture information, which is then supplied to the display device. The result of this process, according to the same portion of the specification, is that “high resolution graphics can be displayed.” It is this process that generates the high resolution graphics that are displayed.

(Dkt. No. 168, at 10 (citation omitted).) Plaintiff also emphasizes that the passage at issue discloses that transmission can be in bursts. (*Id.*)

## (2) Analysis

Claims 1 and 12, in which the disputed terms appear, are reproduced in the discussion of the term “base storage and control system,” above. The specification discloses:

The serial bit stream is modulated and transmitted to transceiver 14. From transceiver 14, the picture information is conducted, under control of the address signals, to appropriate memory locations of the graphics card and the stored information is then supplied to the display device. With this arrangement, new picture information must be transmitted only when there is a change in some part of the displayed image. Therefore, high resolution graphics images can be displayed at input/output unit 2 without requiring a high capacity channel for transmitting the picture information. Information to update the display can be transmitted in bursts.

‘598 Patent at 5:37-49. The parties have also addressed the following passages:

Each of the resulting signals is conducted to a 10 [sic] respective demodulator 64, from which the resulting demodulated signals, corresponding to those supplied to modulators 46, may be delivered to the respective inputs of display device 12.

\* \* \*

According to another embodiment of the invention, the graphics display capability of the system could be enhanced by constructing device 12 as a high

resolution display device, including a suitable graphics card in unit 2 and installing a special interface card in unit 4.

*Id.* at 4:46-50 and 5:21-25.

*HP* found:

*HP* has not met[]t its burden to show that the “arrangement for providing” claims lack sufficient structure to enable one of ordinary skill in the art to perform the recited functions. The portion of the function at issue is “using the display output signal,” and the structure corresponding to this function merely needs to be able to use the “display output signal . . . to generate a portion of the full screen display.” Nothing in the claim specifies what form the “display output signal” must be in when it is used to generate the full screen display. Therefore, the specification need only disclose a structure able to use the “display output signal” in some form, and Column 5, lines 37-49 clearly links the “graphics card” to the function of “using the display output signal.” As such, the Court concludes that the structures corresponding to the functions recited in the claims are the graphics card and the display device described at Column 5, lines 37-49.

*HP* at 8-9.

The Court reaches the same conclusion here as in *HP*. See *Maurice*, 2006 WL 1751779, at \*4; see also *TQP*, 2014 WL 2810016, at \*6. The Court therefore hereby expressly rejects Defendant’s argument that there is a lack of detail in the specification that renders the claims indefinite. See *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1384-85 (Fed. Cir. 2011) (“[T]he amount of detail that must be included in the specification depends on the subject matter that is described and its role in the invention as a whole, in view of the existing knowledge in the field of the invention”).

The Court accordingly hereby construes the disputed terms as set forth in the following chart:

<u>Term</u>	<u>Construction</u>
<p>“an arrangement for providing a continuously-displayed full screen display using the display output signal received in bursts to generate a portion of the full screen display corresponding to the display output signal” (Claim 1)</p> <p>“an arrangement for providing a continuously-displayed full screen display that differs from a previously-received full screen display, [using the display output signal received in bursts to generate a portion of the full screen display corresponding to the display output signal]” (Claim 12)</p>	<p><b>This term is subject to 35 U.S.C. § 112, ¶ 6.</b></p> <p><b>Function:</b>  <b>“providing a continuously-displayed full screen display using the display output signal received in bursts to generate a portion of the full screen display corresponding to the display output signal”</b></p> <p><b>Structure:</b>  <b>“the graphics card and the display device disclosed in the ‘598 Patent at 5:37-49,<sup>6</sup> and their equivalents”</b></p>

**F. “an arrangement for demodulating a communicated signal” and “an arrangement for modulating at least one of the input signal and the output display signal”**

“an arrangement for demodulating a communicated signal” (Claim 8)	
<b>Plaintiff’s Proposed Construction</b>	<b>Defendant’s Proposed Construction</b>
<p>This term is subject to 35 U.S.C. § 112, ¶ 6.</p> <p>Function:  “demodulating a communicated signal”</p> <p>Structure:  “a transceiver including a demodulator, and their equivalents”</p>	<p>Indefinite.</p> <p>This claim element is a means-plus function claim element and is subject to 35 U.S.C. § 112, ¶ 6.</p>

---

<sup>6</sup> Because the line numbering for column 5 of the patent specification does not align precisely with the lines cited here, the Court includes line number 49 to ensure that the finder of fact will understand that this citation includes the last cited sentence, which discloses burst transmission.

<b>“an arrangement for modulating at least one of the input signal and the output display signal” (Claim 8)</b>	
<b>Plaintiff’s Proposed Construction</b>	<b>Defendant’s Proposed Construction</b>
<p>This term is subject to 35 U.S.C. § 112, ¶ 6.</p> <p><b>Function:</b> “modulating at least one of the input signal and the output display signal”</p> <p><b>Structure:</b> “(1) a transceiver including a modulator, or (2) a transceiver including a modulator and a signal amplifier, and their equivalents”</p>	<p>Indefinite.</p> <p>This claim element is a means-plus function claim element and is subject to 35 U.S.C. § 112, ¶ 6.</p>

(Dkt. No. 163, at 18-19; Dkt. No. 160, Ex. C, at 2.) *HP* did not address these terms.

The parties agree that these are means-plus-function terms governed by 35 U.S.C. § 112, ¶ 6. (Dkt. No. 163, at 18-19.) Originally, the parties disputed whether the specification discloses sufficient corresponding structure. (*See id.; see also* Dkt. No. 160, Ex. B, at 3; *id.*, Ex. C, at 2.)

In its response brief, Defendant submits that the parties have reached agreement to construe these terms as set forth below. (Dkt. No. 166, at 1.)

The Court accordingly hereby construes these terms as set forth in the following chart:

<u>Term</u>	<u>Construction</u>
“an arrangement for demodulating a communicated signal”	<p><b>Subject to 35 U.S.C. § 112, ¶6.</b></p> <p><b>Function:</b> <b>“demodulating a communicated signal”</b></p> <p><b>Structure:</b> <b>“a transceiver including a demodulator, and their equivalents”</b></p>

“an arrangement for modulating at least one of the input signal and the output display signal”	<p><b>Subject to 35 U.S.C. § 112, ¶6.</b></p> <p><b>Function:</b> “modulating at least one of the input signal and the output display signal”</p> <p><b>Structure:</b></p> <p class="list-item-l1">(1) a transceiver including a modulator, or</p> <p class="list-item-l1">(2) a transceiver including a modulator and a signal amplifier, and their equivalents.</p>
--	---

## V. CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit. The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

Within thirty (30) days of the issuance of this Memorandum Opinion and Order, the parties are hereby ORDERED, in good faith, to mediate this case with the mediator agreed upon by the parties. As a part of such mediation, each party shall appear by counsel and by at least one corporate officer possessing sufficient authority and control to unilaterally make binding decisions for the corporation adequate to address any good faith offer or counteroffer of settlement that might arise during such mediation. Failure to do so shall be deemed by the Court as a failure to mediate in good faith and may subject that party to such sanctions as the Court deems appropriate.

**So ORDERED and SIGNED this 21st day of January, 2015.**

  
\_\_\_\_\_  
RODNEY GILSTRAP  
UNITED STATES DISTRICT JUDGE